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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/784,157	02/24/2004	Takahiro Hasegawa	1614.1388	8273

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EXAMINER

FLOURNOY, HORACE L

ART UNIT	PAPER NUMBER
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2189

DATE MAILED: 09/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/784,157

Applicant(s)

HASEGAWA, TAKAHIRO

Examiner

Horace L. Flournoy

Art Unit

2189

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on amendment filed on 6/13/2006.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 1-10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

This Office action has been issued in response to amendment filed 13 June 2006. Claims 1-22 are pending. Applicant's arguments have been carefully and respectfully considered, but they are not entirely persuasive, as will be discussed in more detail below, even in light of the instant amendments. Accordingly, this action has been made FINAL.

REJECTIONS NOT BASED ON PRIOR ART

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 11-22 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The specification gives no description which would enable the examiner to determine the *metes and bounds* of: "via" (line 2), "substantially" (line 4), and "based on" (lines 7 and 10) of independent claim 11; "via" (lines 5, 8, and 11) of independent claim

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15; and "via" (line 2), "substantially" (line 5), and "based on" (lines 8 and 11) of independent claim 19. All dependent claims are rejected.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 11-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Correction and clarification is required for the following claims:

Independent claim 11:

- It is not clear how backing up data stored occurs "**via** a first address correspondence table" (line 2).
- The examiner cannot determine the metes and bounds of the limitations in which "**substantially** equal to..." (line 4), is used.
- It is not clear how "creating..." occurs "**based on** the first address correspondence table" (line 7).
- It is not clear how copying occurs "**based on**...address correspondence tables" (line 10).

Independent claim 15

- It is not clear how “storage is associated...**via**...address correspondence table” (lines 5, 8, and 11).
-

Independent claim 19

- It is not clear how backing up data stored occurs “**via** a first address correspondence table” (line 2).
- The examiner cannot determine the metes and bounds of the limitations in which “**substantially** equal to...” (line 5), is used.
- It is not clear how “creating...” occurs “**based on** the first address correspondence table” (line 8).
- It is not clear how copying occurs “**based on**...address correspondence tables” (line 11).

The usage of these words, particularly given the lack of an adequate written description in the specification as set forth in the 35 USC 112 first paragraph rejections above, fails to provide the examiner with claim language that particularly points out and distinctly claims the present application. All dependent claims are rejected.

REJECTIONS BASED ON PRIOR ART

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 11-13, 15-17, and 19-21 are rejected under 35 U.S.C. 102(e) as being anticipated by **Takeda et. al (U.S. Patent 7,076,620 hereafter referred to as Takeda).**

With respect to **independent claims 11 and 19,**

“A method of backing up data stored in a first virtual storage associated with a source physical storage [Takeda discloses this limitation, e.g. in column 19, lines 25-27] via a first address correspondence table [Takeda discloses “virtualization server 300” which maps physical to virtual addresses (see column 20, lines 5-9. Takeda further discloses in column 20, lines 16-19, “FIG. 16 shows a exemplary table 170 on address mapping between the host 100 and the disk array devices 200 used to implement the virtualized volumes provided in the seventh and eight embodiments.”] into a target medium, comprising: creating a second virtual storage associated with a backup physical storage substantially equal to a size of actual data stored in the first virtual storage; [See FIG. 14, element 20 and all associated text within the

specification] *creating a second address correspondence table between the first virtual storage and the second virtual storage based on the first address correspondence table [See FIG. 14, element 300B] and a third address correspondence table between the second virtual storage and the backup physical storage; [Takeda teaches the usage of two or more storage system which include a virtual storage which is associated with a physical storage in column 18, lines 32-40] copying the actual data from the source physical storage to the backup physical storage based on the first, second and third address correspondence tables; [Takeda discloses “virtualization server 300” can share its address mapping information with other (two or more) disk devices in column 20, lines 5-9] and backing up all the actual data from the backup physical storage to the target medium.” [See FIG. 14, elements 5105, 5500, and 5600]*

With respect to **independent claim 15**,

“A virtual storage system for backing up data in a target medium, [Takeda discloses this limitation, e.g. in column 19, lines 25-27] comprising: a first storage virtually storing data including actual data; a source physical storage physically storing data including actual data, wherein said source physical storage associated with the first virtual storage via a first address correspondence table; [Takeda discloses “virtualization server 300” which maps physical to virtual addresses (see column 20, lines 5-9. Takeda further discloses in column 20, lines 16-19, “FIG. 16 shows a exemplary table 170 on address mapping between the host 100 and the disk array

devices 200 used to implement the virtualized volumes provided in the seventh and eight embodiments.”] a second virtual storage [See FIG. 14, element 15B] virtually storing actual data copied from the first virtual storage, wherein said second virtual storage is associated with the first virtual storage via a second address correspondence table; [See FIG. 14, elements 3000 and 310] and a backup physical storage physically storing actual data copied from the source physical storage, [See FIG. 14, element 5600] wherein the backup physical storage is associated with the second virtual storage via a third address correspondence table, [Takeda teaches the usage of two or more storage system which include a virtual storage which is associated with a physical storage in column 18, lines 32-40. Takeda discloses “virtualization server 300” can share its address mapping information with other (two or more) disk devices in column 20, lines 5-9] wherein all the actual data is backed up from the backup physical storage to the target medium.” [See FIG. 14, elements 5105, 5500, and 5600]

With respect to **claims 12, 16, and 20,**

“The method as claimed in claim 11, wherein the backing up all the actual data comprises recording the first and second address correspondence tables in the target medium.” [See FIG. 14, element 5405. Takeda teaches a first and second address correspondence table (element 310) that is recorded into a target medium “JNL” through step 5405]

With respect to **claims 13, 17, and 21,**

“The method as claimed in claim 11, wherein the first address correspondence table comprises one or more correspondence records between logical addresses of the first virtual storage and block addresses of the source physical storage, [Takeda discloses “virtualization server 300” which maps physical to virtual addresses (see column 20, lines 5-9. Takeda further discloses in column 20, lines 16-19, “FIG. 16 shows a exemplary table 170 on address mapping between the host 100 and the disk array devices 200 used to implement the virtualized volumes provided in the seventh and eight embodiments.”] and the second address correspondence table[See FIG. 14, element 310] comprises one or more correspondence records between logical addresses of the first virtual storage and logical addresses of the second virtual storage, and the third address correspondence table comprises one or more correspondence records between logical addresses of the second virtual storage and block addresses of the backup physical storage.” [See FIG. 11. Takeda teaches the usage of two or more storage system which include a virtual storage which is associated with a physical storage in column 18, lines 32-40. Takeda discloses “virtualization server 300” can share its address mapping information with other (two or more) disk devices in column 20, lines 5-9]

ACKNOWLEDGMENT OF ISSUES RAISED BY THE APPLICANT

Response to Amendment

Applicant's arguments with respect to independent claims 11, 15 and 19 have been considered but are moot in view of the new ground(s) of rejection.

CONCLUSION

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Direction of Future Correspondences

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Horace L. Flournoy whose telephone number is (571) 272-2705. The examiner can normally be reached on Monday through Friday 8:00 AM to 5:30 PM (ET).

Important Note

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Reginald G. Bragdon can be reached on (571) 272-4204. The fax phone numbers for the organization where this application or proceeding is assigned is (703) 746-7239.

Information regarding the status of an Application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or PUBLIC PAIR. Status information for unpublished applications is available through Private Pair only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

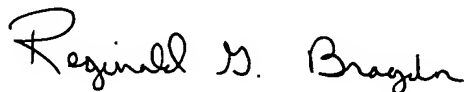
Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2100.

Horace L. Flournoy



Patent Examiner
Art unit: 2189

Reginald G. Bragdon



Supervisory Patent Examiner
Technology Center 2100